

CLAIMS

1. An antiviral fiber, wherein
fine particles of a metal and/or a metal compound are dispersed
5 in the fiber;
the fiber has a cross-linked structure and a carboxyl group
in a molecule thereof; and
the fine particles have deactivation effect to a virus and poor
solubility in water.
- 10 2. The antiviral fiber according to Claim 1, wherein at least a
part of the carboxyl group exists as a salt.
- 15 3. The antiviral fiber according to Claim 1 or 2, wherein the metal
and/or metal compound is at least one kind selected from a group
consisting of Ag, Cu, Zn, Al, Mg, and Ca, and a metal compound
thereof.
- 20 4. The antiviral fiber according to any one of Claims 1 to 3,
wherein the metal and/or metal compound is included at not less
than 0.2 mass% as a metal in the fiber component.
- 25 5. An antiviral textile product, comprising the antiviral fiber
according to any one of Claims 1 to 4, in cottony shape, nonwoven
fabric shape, textile shape, paper shape, or knitted fabric shape.

6. The antiviral textile product according to Claim 5, wherein the metal and/or metal compound is included at not less than 0.2 mass% as a metal in whole of the fiber component.

5 7. A method for producing an antiviral fiber, comprising:
bonding a metal ion of a metal having deactivation effect to a virus and poor solubility in water to at least a part of a carboxyl group of a fiber having a cross-linked structure and a carboxyl group in a molecule thereof; and
10 then depositing fine particles of the metal and/or metal compound in the fiber by reduction and/or substitution reaction.

8. The method for producing an antiviral fiber according to Claim 7, comprising:

15 using a fiber, wherein the fiber has a cross-linked acrylic fiber as a basic skeleton and at least a part of a functional group of a molecule of the cross-linked acrylic fiber is hydrolyzed, as the fiber having a cross-linked structure and having a carboxyl group in a molecule thereof;
20 bonding the metal ion of a metal to at least a part of the carboxyl group;
then depositing fine particles of the metal and/or metal compound in the fiber by reduction and/or substitution reaction.